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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,248	06/29/2001	Carl A. Caroli	2-54-9	9196

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EXAMINER
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LI, SHI K

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/896,248	<b>Applicant(s)</b>  CAROLI ET AL.	
	<b>Examiner</b> Shi K. Li	<b>Art Unit</b> 2633	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 adds new limitation "only optical channels that have been previously dropped are add" in line 21 of the claimed. The specification, as originally filed, teaches on page 8, lines 23-26 "wavelength blocker 240 would selectively pass or block individual optical channels such that only those optical channels that are actually to be added at add/drop node 115 would be allowed to pass via add path 231 to combiner 230". Nowhere does the specification teach the newly added limitation. Therefore, the new limitation is considered new matter.

Similarly, claim 13 recites new limitation "only optical channels that have been previously dropped are added" in lines 21-22 of the claim. This new limitation is not taught by the specification as originally filed and considered as new matter.

Claim 19 recites new limitation "that have been previously dropped" in line 15 of the claim. This new limitation is not taught by the specification as originally filed and considered as new matter.

Claim 21 recites new limitation "that have been previously dropped" in line 15 of the claim. This new limitation is not taught by the specification as originally filed and considered as new matter.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-3, 9, 12-15 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sridhar (U.S. Patent 5,778,118) in view of Park et al. (U.S. Patent Application Pub. 2002/0067526 A1).

Regarding claims 1 and 13, Sridhar discloses in FIG. 1 an add/drop node and method capable of adding or dropping at least one optical channel of a WDM signal. The add/drop node (FIG. 1) comprises an optical coupler 20 for receiving and coupling a WDM input signal to both a drop transmission path and a through transmission path within the add/drop node (col. 4, lines 10-21), an optical splitter 62 coupled to the drop transmission path 60 for optically separating the WDM signal into a plurality of optical channels wherein one or more of the plurality of optical channels are selectively dropped from the WDM input signal (col. 5, line 64-col. 6, line 2), a first wavelength blocking element 40 coupled to the through transmission path 50 for selectively blocking the one or more optical channels being selectively dropped so that only optical channels not being dropped at the add/drop node are passed on the through transmission path (col. 5, lines 2-5), an add transmission path 83, an optical combiner 82 for combining a plurality of optical channels to form a WDM add signal and a combiner 30 coupled to each of the add and through transmission paths for combining the add signal with optical channels in the through

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transmission path to generate a WDM output signal for transmission from the add/drop node (col. 4, lines 20-24).

The difference between Sridhar and the claimed invention is that Sridhar does not teach a second wavelength blocking element for selectively blocking optical channels not being added so that only optical channels that have been previously dropped are added at the add/drop node. Park et al. shows in FIG. 2 a add filter 271 for selectively blocking optical channels not being added (paragraph [0021]). One of ordinary skill in the art would have been motivated to combine the teaching of Park et al. with the add/drop node of Sridhar because the add filter eliminates optical noise (paragraph [0023] of Park et al.). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a block filter for blocking channels that are not to be added, as taught by Park et al., in the add/drop node of Sridhar because the add filter eliminates optical noise.

Regarding claims 2 and 14, Park et al. teaches in paragraph [0037] to use tunable filters for both drop filter 231 and add filter 271 so that channels to be dropped and added can be controlled remotely. Also, Sridhar teaches in col. 9, lines 53-55 to use tunable filter for dynamically configuring selective blocking function.

Regarding claims 3 and 15, Sridhar teaches in col. 4, lines 31-35 equalizing gain.

Regarding claim 9, Sridhar discloses in FIG. 1 demultiplexer 62.

Regarding claim 12, both Sridhar and Park et al. teach a WDM signal comprising a plurality of optical channels. Park et al. teaches in paragraph [0037] tunable filter for dropping and adding any desirable channels.

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Regarding claim 19 and 21, Sridhar discloses in FIG. 1 a method for adding/dropping at least one optical channel of a WDM signal at an add/drop node. FIG. 1 includes a first transmission path 60 for dropping selected optical channels from the WDM signal, a second transmission path 50 for routing selected optical channels through the add/drop node, and a third transmission path 83 for adding selected optical channels to the WDM signal. Sridhar teaches in FIG. 1 isolator 90 for receiving a WDM input signal, a coupler 20 for distributing the WDM input signal to the first and second transmission paths, wavelength selector 63A-D for dropping a plurality of optical channels in the first transmission path, transmitters 81A-D and combiner 82 for adding a plurality of optical channels to the third transmission path, filter 40 for selectively blocking wavelength channels in the second transmission path, coupler 30 for combining optical channels from the second and third transmission path. Sridhar suggests in FIG. 1 that the filter 40 blocks channels that are dropped and channels that are added. The difference between Sridhar and the claimed invention is that Sridhar does not teach selectively passing wavelengths in the third transmission path. Park et al. shows in FIG. 2 add filter 271 for selectively blocking optical channels that are not being added. One of ordinary skill in the art would have been motivated to combine the teaching of Park et al. with the method of Sridhar because the add filter eliminates optical noise (paragraph [0023] of Park et al.). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a block filter for blocking channels that are not to be added, as taught by Park et al., in the method of Sridhar because the add filter eliminates optical noise.

Regarding claims 20 and 22, Sridhar teaches in col. 9, lines 53-55 to use tunable filter for dynamically configuring selective blocking function.

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5. Claims 4-8, 10, 11 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sridhar and Park et al. as applied to claims 1-3, 9, 12-15 and 19-22 above, and further in view of Thomas et al. (U.S. Patent 6,429,974 B1).

Sridhar and Park et al. have been discussed above in regard to claims 1-3, 9, 12-15 and 19-22. Regarding claims 4 and 16, the difference between Sridhar and Park et al. and the claimed invention is that Sridhar and Park et al. do not teach an interleaver for separating the WDM input signal into first and second groups. Thomas et al. teaches in FIG. 12 an add/drop system using an interleaver I for separating the WDM input signal into first and second groups so that optical channels in each of the groups are spaced apart by at least one wavelength as illustrated in FIG. 10. One of ordinary skill in the art would have been motivated to combine the teaching of Thomas et al. with the modified add/drop node and method of Sridhar and Park et al. because it supports batch processing of a group of channels with common components, e.g., express routing path for a group of channels. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use interleaver to separate WDM signal into first and second channel groups, as taught by Thomas et al., in the modified add/drop node and method of Sridhar and Park et al. because it supports batch processing of a group of channels with common components.

Regarding claims 5 and 6, Thomas et al. shows in FIG. 10 optical channels in each of the first and second groups are spaced apart by at least one wavelength, wherein the first group includes optical channels having an odd channel number and the second group includes optical channels having an even channel.

Regarding claims 7-8 and 17, Thomas et al. shows in FIG. 12 an express routing path (pass-through). Thomas et al. also teaches in FIG. 13 express routing path 1314 where channels cannot be dropped.

Regarding claims 10-11 and 18, Thomas et al. teaches in FIG. 14 interleavers for separating the WDM input signal in the drop transmission path into at least two groups of optical channels according to a prescribed pattern so that channel spacing between optical channels is increased (see Thomas et al, col. 6, line 66-col. 7, line 8).

#### ***Response to Arguments***

6. Applicant's arguments filed 14 September 2004 have been fully considered but they are not persuasive.

First, the Applicant's arguments are based on new matter and, therefore, are moot.

Furthermore, the Applicant argues "one of ordinary skill in the art on reading the disclosures of Sridhar and Park would not be motivated to combine the two because to do so would at least render Park unsatisfactory for its intended purpose; Park would not be able to add any arbitrary number of optical channels as is required by the disclosure of Sridhar." The examiner disagrees. Sridhar clearly suggests in FIG. 1 to add and drop the same channels. Sridhar teaches in col. 7, lines 15-18 that the invention is not limited to the suggestion of FIG. 1. Even though Sridhar teaches additional features that are not claimed in the claimed invention, the combination of Sridhar and Park reads on the claim. That is, the claimed invention is just a special case of the combination of Sridhar and Park, which is suggested in FIG. 1 of Sridhar. Park teaches that a filter in the add transmission path reduces or eliminates noise (see paragraph [0023] of Park et al.). One of ordinary skill in the art would have been motivated to combine the



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teaching of Park with the add/drop node of Sridhar because a filter in the add transmission path reduces noise and improves signal quality. Therefore, the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl  
23 February 2005

  
**M. R. SEDIGHIAN**  
**PRIMARY EXAMINER**